

We claim:

1. A composition for use in forming a polymeric stent for insertion into a vessel, comprising

between 10-98% of a first monomer composed of an aliphatic ester C1-C50 of acrylic acid which when homopolymerized has a glass transition temperature lower than about 25°C; and

a second monomer having sites of unsaturation and capable of copolymerization with the first monomer, the second monomer when homopolymerized having a glass transition temperature greater than 25°C,

said monomers when polymerized in the presence of a crosslinker forming a polymer having a glass transition temperature of less than about 25°C.

2. The composition of claim 1, wherein the first monomer is an aliphatic ester of acrylic acid.

3. The composition of claim 1, wherein the first monomer is fluorinated.

4. The composition of claim 1, wherein the first monomer is selected from butyl acrylate and pentafluoropropylacrylate.

5. The composition of claim 1, wherein said second monomer is an ester of methacrylic acid or an ester of acrylic acid.

6. The composition of claim 1, wherein the second monomer is selected from the group consisting of methylmethacrylate, isobornyl methacrylate, isobutyl methacrylate, perfluoroacetylmethacrylate, tertiary butylmethacrylate, phenylethylmethacrylate, styrene, hydroxyethyl methacrylate, glycerol methacrylate, n-vinyl pyrrolidone and heptadecylfluorodecyl-methacrylate.

7. The composition of claim 1, which further includes a third monomer of a methacrylic acid ester of polyethylene oxide, where the ester side chain has a molecular weight of between 200-10,000 Daltons.

8. The composition of claim 7, wherein the third monomer is selected from the group consisting of polyethyleneglycol dimethacrylate, polyethyleneglycol methacrylate and polyethyleneglycol acrylate.

9. The composition of claim 7, wherein the first monomer is butyl acrylate, the second monomer is methylmethacrylate and the third monomer is polyethylene glycol methacrylate.

10. The composition of claim 1, wherein the first monomer is pentafluoropropylacrylate and the second monomer is heptadecylfluorodecyl methacrylate.

11. The composition of claim 7, wherein the first monomer is pentafluoropropylacrylate and the second monomer is methylmethacrylate and the third monomer is polyethylene glycol methacrylate.

12. A stent composed of the composition of claim 1, said stent including a therapeutic agent.

13. A composition for use in forming a stent for insertion into a vessel, comprising

- (a) greater than about 40 weight percent of pentafluoropropyl acrylate monomer;
- (b) between 3-30 weight percent of (heptadecylfluorodecyl methacrylate) monomer;

said composition when polymerized forming a polymer having a glass transition temperature of less than 25°C.

14. A composition for use in forming a stent for insertion into a vessel, comprising

- (a) greater than about 40 weight percent of pentafluoropropyl acrylate monomer;
- (b) between 3-30 weight percent of polyethylene glycol methacrylate monomer or polyethyleneglycol monomethylether methacrylate monomer; and
- (c) between 2-40 weight percent of methylmethacrylate monomer; said composition when polymerized forming a polymer having a glass transition temperature of less than 25°C.